

BOTANY.—*Studies of South American plants, XVI.* A. C. SMITH, U. S. National Museum.

A recent collection of plants made in Peru and Ecuador by Dr. Werner Rauh, Botanisches Institut, Heidelberg, and his associate Dr. Gerhard Hirsch, has disclosed three species of the family Vacciniaceae not previously described. The material upon which the following descriptions are based is deposited in the U. S. National Herbarium.

Sphyrospermum venustum, sp. nov.

Frutex gracilis terrestris ad 50 cm altus, ramulis glabris elongatis 1.5-3 mm diametro basis versus foliorum valde confertorum conspicue incrassatis; stipulis pro genere egregiis binis intrapetiolaribus filiformibus 2-4 mm longis mox caducis; petiolis inconspicuis haud 1 mm longis canaliculatis glabris; laminis in sicco papyraceis fusco-viridibus forsan in vivo carnosis, elliptico-obovatis, 12-16 mm longis, 4-7 mm latis, basi obtusis, apice rotundatis, margine incrassatis leviter recurvatis, juventute ubique minute puberulis mox glabratibus, costa et nervis in sicco utrinque paullo elevatis inconspicuis, nervis secundariis utrinsecus saepe 3 adscendentibus, rete venularum obscuro immerso; inflorescentia axillari 1-flora quam foliis brevior, rhachi subnulla, bracteis sub floribus paucis, 2 intimis lanceolatis circiter 1 mm longis acutis obscure ciliolatis, pedicellis haud 0.5 mm longis superne incrassatis apicem versus obscure glanduloso-pilosis (pilis fuscis ad 0.2 mm longis); calyce pilis paucis obscuris limbo et loborum margine exceptis glabro sub anthesi circiter 3 mm longo et 2 mm diametro, tubo cupuliformi obscure 10-gono circiter 1 × 1 mm limbo suberecto papyraceo 5-lobato, lobis deltoideis acutis circiter 1 mm longis et latis, sinibus rotundatis; disco annulari-pulvinato glabro; corolla glabra tenuiter carnosae cylindrico-urceolata sub anthesi circiter 8 mm longa et medium versus 3 mm diametro, basi valde contracta, lobis 5 deltoideis acutis circiter 1 mm longis; staminibus 5 quam corolla paullo brevioribus, filamentis ligulatis circiter 2.5 mm longis supra medium gradatim angustatis et superne intus minute pilosis, extus glabris, antheris circiter 4.8 mm longis; thecis longitudine tubulos subaequantibus basi rotundatis, tubulis gracilibus per rimas ovaes circiter 1 mm longas dehiscentibus; stylo gracili corollam fere aequante, stigmate minuto.

Type in the U. S. National Herbarium, no. 2180834, collected between Chimborazo and Guaranda, Province of Bolívar, Ecuador, alt. 3,000 m, in upper zone of the "ceja de la montaña," September 20, 1954, by W. Rauh & G. Hirsch (no. 388).

The graceful species here described is remarkably isolated, but *Sphyrospermum* seems to be the best generic position for it. The crowded leaves, the branchlets conspicuously swollen at the leaf bases, and the peculiar filiform stipules are striking characteristics. The small, elliptic-obovate, rounded leaf blades and the solitary subsessile flowers with only five stamens further separate the new species from its congeners. The reduced number of stamens occurs elsewhere in *Sphyrospermum*, as well as in the related genera *Themistoclesia* and *Eleutherostemon*, but no species with this character are suggestive of *S. venustum*.

Ceratostema callistum, sp. nov.

Frutex epiphyticus 30-50 cm altus, ramis tubere magno ad 20 cm diametro enatis, ramulis subteretibus copiose canescente-hispidulis (pilis gracilibus 1-2 mm longis eglandulosis ad apices ramulorum cum pilis graciliter clavatis glandulosis aequilongis intermixtis); stipulis intrapetiolaribus binis e basi incrassata subulatis 3-5 mm longis ut ramulis hispidulis; petiolis incrassatis rugulosis 4-5 mm longis pariter hispidulis; foliorum laminis subcoriaceis in sicco brunneo-viridibus ovatis, 6-9 cm longis, 3.5-5 cm latis, basi cordatis, in acuminem callosum 1-1.5 cm. longum gradatim angustatis, margine planis paullo incrassatis, supra molliter pilosis (pilis haud 0.3 mm longis) ac etiam parciore glanduloso-pilosis (pilis ad 0.8 mm longis) demum glabrescentibus, subtus pariter pilosis sed pilis longioribus (ad 1 mm) et persistentibus, pinnatinerviis, costa supra leviter impressa subtus elevata, nervis lateralibus utrinsecus plerumque 3 inconspicuis curvatis subplanis, nervis intimis cum costa 1-2 cm concurrentibus, rete venularum immerso; inflorescentiis apices ramulorum versus axillaribus racemosis ut videtur 4-8-floris breviter pedunculatis, rhachi pedicellisque pilis debilibus pallidis 0.4-0.8 mm longis molliter pubescentibus ac etiam pilis anguste clavatis glandulosis aequi-

longis parciore ornatis, rhachi subtereti ad 5 cm longa; bracteis sub floribus papyraceis lanceolatis 5-8 mm longus extus ut pedicellis pubescentibus intus glabris, pedicellis sub anthesi 10-18 mm longis cum calyce articulatis medium versus bibracteolatis, bracteolis bracteis similibus; calyce sub anthesi 22-25 mm longo apice circiter 15 mm diametro ubique ut pedicellis glanduloso- et glanduloso-pilosis sed pilis brevioribus, tubo cupuliformi circiter 5 mm longo et diametro, limbo suberecto papyraceo reticulato-nervato profunde 5-lobato, lobis lanceolatis 14-17 mm longis; disco cupuliformi glabro crenulato-marginato; corolla tenuiter carnosa cylindrica circiter 45 mm longa et basim versus 6 mm diametro, superne paullo angustata, extus ut calyce molliter pilosa sed tantum superne glandulosa, intus glabra, profunde 5-lobata, lobis subulato-lanceolatis circiter 10-12 mm longis; staminibus 10 sub anthesi leviter exsertis, filamentis membranaceis glabris circiter 7 mm longis in tubum cohaerentibus, antheris circiter 40 mm longis thecis conspicue granulatis circiter 11 mm longis basi mucronulatis et incurvatis, tubulis circiter 29 mm longis gracillimis (superne haud 0.15 mm diametro) per poros ovaes subapicales circiter 1 mm longos deliscentibus; stylo filiformi leviter exserto, stigmatate minuto.

Type in the U. S. National Herbarium, no. 2180858, collected near the Hacienda Taulis, near Chiclayo, Valle Río Saña, Department of Lambayeque, Peru, alt. 2,500 m, October 13, 1954, by W. Rauh & G. Hirsch (no. 2186).

Dr. Rauh states that there is a beautiful forest composed chiefly of *Podocarpus* near the Hacienda Taulis, this being the only substantial wooded section in the entire region. The new species is a frequent epiphyte here, its branches arising from a large tuber up to 20 cm in diameter. The corolla is said to be carmine-red without and greenish within.

This very distinct species of *Cerastostema*, compared with my recent key to the 16 known species (in Mem. New York Bot. Gard. 8: 57. 1952), is seen to be closely related only to *C. peruvianum* Gmel. and *C. pensile* (A. C. Sm.) A. C. Sm., from both of which it is at once distinguished by its narrowly lanceolate calyx lobes. From *C. peruvianum* the new species further differs in its more copious and often glandular indument, its less deeply cordate leaf blades, which are acuminate rather than obtuse at apex, and in its terete rather than costate

calyx tube. Our plant is obviously distinct from *C. pensile* in its more copious foliar indument and in its narrowly lanceolate rather than broadly ovate inflorescence bracts and bracteoles.

Cerastostema callistum is the only species of the genus positively known to occur in Peru, although it is probable that some of the Ecuadorian species actually extend southward.

Thibaudia rauhii, sp. nov.

Frutex 0.3-1 m altus ut videtur epiphyticus et tubere magno enatus, ramulis subteretibus gracilibus apices versus 1.5-2 mm diametro, partibus juvenilibus copiose pilosis (pilis albidis circiter 1 mm longis) mox glabrescentibus; stipulis intrapetiolaribus subulatis circiter 2 mm longis pilosis evanescentibus; petiolis leviter canaliculatis 3-3.5 mm longis ut ramulis pubescentibus, laminis subcoriaceis in sicco viridibus oblongo-ovatis, 3-4 cm longis 1.3-1.7 cm latis, basi anguste rotundatis, apice obtusis, margine integris anguste recurvatis, utrinque molliter pilosis (pilis albis 0.3-0.8 mm longis supra evanescentibus subtus persistentibus) ac etiam subtus parce nigro-glanduloso-pilosis, costa supra leviter impressa subtus prominente, nervis secundariis utrinsecus plerumque 2 adscendentibus utrinque inconspicue elevatis, rete venularum immerso; inflorescentia subfasciculata 2-4-flora pilis albis 0.5-1 mm longis ubique copiose molliter pilosa, basi bracteis paucis deltoideo-lanceolatis ad 3.5 mm longis circumdata; pedicellis teretibus sub anthesi 6-9 mm longis basim versus bibracteolatis, bracteolis lanceolatis circiter 5 mm longis caducis; calyce sub anthesi 7-7.5 mm longo et apice diametro, tubo cupuliformi circiter 3 mm longo et diametro, limbo erecto-patente quam tubo manifeste longiore 5-lobato, lobis late deltoideis circiter 1 mm longis acutis; disco annulari-pulvinato glabro; corolla rubra tenuiter carnosa subcylindrica sub anthesi 15-16 mm. longa et medium versus circiter 6 mm diametro, extus praeter basim versus copiose pilosa, intus glabra, lobis breviter deltoideis obtusis; staminibus 10 circiter 10 mm longis, filamentis glabris in tubum circiter 3 mm longum laxo connatis, antheris circiter 8 mm longis, loculis basi incurvatis, tubulis gracilibus 2.5-3 mm longis (quam thecis brevioribus), rimis elongatis; stylo quam corolla brevior, stigmatate parvo peltato.

Type in the U. S. National Herbarium, no. 2180848, collected in the valley of the Río